<u>AMENDMENTS TO THE CLAIMS</u>

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A method for use in a wireless communications network for allocating spectral resource made up of a plurality of resource units in a multiple access wireless link extending between a partition of a base station and at least one child user equipment of the partition, wherein the network has at least one base station which has at least two partitions or the network has at least two base stations, each having at least one partition, the method comprising:

establishing a number of resource units making up a fixed allocation of resource units, said fixed allocation of resource units being the same for all user equipments of the network;

allocating the fixed allocation of resource units to each child user equipment in the partition.

2. (Currently Amended) A method according to claim 1 wherein the number of resource units making up the fixed allocation is established by:

determining a measure of a maximum likely number of child user equipments per partition of the network;

calculating the fixed allocation of resource units based on the ratio of a number of resource units in the partition per unit time to the measure.

3. (Original) A method according to claim 1 wherein the fixed allocation is a selected minimum number of resource units.

4. (Original) A method according to claim 1 wherein the spectral resource is made up of a number of frequency channels and each resource unit is a sub-set of the spectral resource smaller than a frequency channel.

1   5.   (Original) A method according to claim 2 wherein the measure of the maximum likely

2   number of user equipments per partition is derived according to a Poisson distribution of the

3   average number of user equipments per partition of the network.

1   6.   (Currently Amended) A method for use in a wireless communications network for

2   allocating spectral resource made up of a plurality of resource units in a multiple access wireless

3   link extending between a partition of a base station and at least one child user equipment of the

4   partition, wherein the network has at least one base station which has at least two partitions or

5   the network has at least two base stations, each having at least one partition, the method

6   comprising:

7   establishing a number of resource units making up a fixed allocation of resource units,

8   said fixed allocation of resource units being the same for all user equipments of the network;

9   allocating the fixed allocation of resource units to each child user equipment in the

10   partition,

11   wherein the number of resource units making up the fixed allocation is established by:

12   determining a measure of a maximum likely number of child user equipments per

13   partition of the network;

14   calculating the fixed allocation of resource units based on the ratio of a number of

15   resource units in the partition per unit time to the measure,

16   wherein the fixed allocation of resource units is calculated according to the following

17   equation:

18        $F = T/M$

19   where

20   F = number of resource units making up the fixed allocation;

21   T = number of resource units per unit time; and

22   M = maximum likely number of user equipments per partition.

1   7.   (Original) A method according to claim 1 wherein resource units which are not allocated

2   in the fixed allocation of resource units to child user equipments remain unallocated to user

3   equipments.

8.   (Original) A method according to claim 1 wherein the method additionally comprises allocating remaining resource units which are not allocated in the fixed allocation of resource units to child user equipments, hereafter remaining resource units, to child user equipments in the partition by:

    determining the gain of the radio link between the partition and each child user equipment; and

    allocating the remaining resource units among the child user equipments by prioritising user equipments having a high gain link.

9.   (Original) A method according to claim 1 wherein the method additionally comprises allocating remaining resource units which are not allocated in the fixed allocation of resource units to child user equipments, hereafter remaining resource units, to child user equipments in the partition by:

    determining the gain of the radio link between the partition and each child user equipment; and

    allocating the remaining resource units among the child user equipments in the partition in proportion to the gain of the radio links to the child user equipments.

10.   (Original) A method according to claim 1 additionally comprising:

    determining the gain of the radio link between the partition and each child user equipment of the partition; and

    regulating the transmit power of each child user equipment according to the determined gain for that user equipment such that lower gain user equipments transmit with higher power than higher gain user equipments.

11.   (Original) A method according to claim 1 additionally comprising:

    determining the gain of the radio link between the partition and each child user equipment of the partition; and

    regulating the transmit power of each child user equipment such that the transmit power is inversely proportional to the gain.

1   12.   (Original) Computer executable software code stored on a computer readable medium for

2   making a computer execute the method of claim 1.

1   13.   (Original) A programmed computer, which stores computer executable program code for

2   making the computer execute the method of claim 1.

1   14.   (Original) A computer readable medium having computer executable software code

2   stored thereon, which code is for making a computer execute the method of claim 1.

1   15.   (Currently Amended) A wireless communication network, wherein the network has at

2   least one base station which has at least two partitions or the network has at least two base

3   stations, each having at least one partition, ~~via which~~ the network to allow at least one child user

4   equipment to communicate ~~communicates~~ over a wireless link which link comprises spectral

5   resource made up of a plurality of resource units, wherein the network includes a processing

6   block configured to establish a number of resource units making up a fixed allocation of resource

7   units, said fixed allocation of resource units being the same for all user equipments of the

8   network, and to allocate the fixed allocation of resource units to each child user equipment in ~~the~~

9   a particular partition.

1   16.   (Currently Amended) A network according to claim 15 wherein the number of resource

2   units making up the fixed allocation is established by determining a measure of a maximum

3   likely number of child user equipments per partition and calculating the fixed allocation of

4   resource units based on the ratio of a number of resource units in ~~the~~per partition per unit time to

5   the measure.

1   17.   (Original) A network according to claim 15 wherein the fixed allocation is a selected

2   minimum number of resource units.

1   18.   (Original) A network according to claim 15 wherein the spectral resource is made up of a

2   number of frequency channels and each resource unit is a sub-set of the spectral resource smaller

3   than a frequency channel.

1   19.   (Original) A network according to claim 16 wherein the measure of the maximum likely
2   number of user equipments per partition is derived according to a Poisson distribution of the
3   average number of user equipments per partition.

1   20.   (Original) A network according to claim 15 wherein resource units which are not
2   allocated in the fixed allocation of resource units to child user equipments remain unallocated to
3   user equipments.

1   21.   (Original) A network according to claim 15 wherein, for a given partition, the processing
2   block is configured to allocate remaining resource units which are not allocated in the fixed
3   allocation of resource units to each user equipment by allocating the remaining resource units
4   among the child user equipments by prioritising user equipments having a high gain link to the
5   partition.

1   22.   (Original) A network according to claim 15 wherein, for a given partition, the processing
2   block is configured to allocate remaining resource units which are not allocated in the fixed
3   allocation of resource units to each user equipment by allocating the remaining resource units
4   among the child user equipments in the partition in proportion to the gain of the radio links
5   between the child user equipments and the partition.

1   23.   (Original) A network according to claim 15 wherein the transmit power of each child user
2   equipment is regulated according to the gain between that user equipment and its partition such
3   that lower gain user equipments transmit with higher power than higher gain user equipments.

1   24.   (Previously Presented) A resource allocation controller for use in a wireless

2   communications network for allocating spectral resource made up of a plurality of resource units

3   in a multiple access wireless link extending between a partition of a base station and at least one

4   child user equipment of the partition, wherein the network has at least one base station which has

5   at least two partitions or the network has at least two base stations, each having at least one

6   partition, wherein the controller is configured to establish a number of resource units making up

7   a fixed allocation of resource units, said fixed allocation of resource units being the same for all

8   user equipments of the network; and to allocate the fixed allocation of resource units to each

9   child user equipment in the partition.

1   25.   (Original) A controller according to claim 24 wherein the number of resource units

2   making up the fixed allocation of resource units is established by obtaining a measure of a

3   maximum likely number of child user equipments per partition of the network and obtaining a

4   fixed allocation of resource units based on the ratio of a number of resource units in the partition

5   per unit time to the measure.

1   26.   (Original) A controller according to claim 24 wherein the spectral resource is made up of

2   a number of frequency channels and each resource unit is a sub-set of the spectral resource

3   smaller than a frequency channel.

1   27.   (Original) A controller according to claim 25 wherein the measure of the maximum likely

2   number of user equipments per partition is derived according to a Poisson distribution of the

3   average number of user equipments per partition.

1   28.   (Original) A controller according to claim 24 wherein the fixed allocation is a selected

2   minimum number of resource units.

1   29.   (Original) A controller according to claim 24 wherein resource units which are not

2   allocated in the fixed allocation of resource units to child user equipments remain unallocated to

3   user equipments.

1   30.   (Original) A controller according to claim 24 which is configured to allocate remaining
2   resource units which it did not allocate in the fixed allocation of resource units by prioritising
3   child user equipments of the partition having a high gain link to the partition.

1   31.   (Original) A controller according to claim 24 which is configured to allocate remaining
2   resource units which it did not allocate in the fixed allocation of resource units by allocating the
3   remaining resource units among the child user equipments in the partition in proportion to the
4   gain of the radio links to the child user equipments.

1   32.   (Currently Amended) A controller according to claim 24 for deployment in a network in
2   which the transmit power of each child user equipment is regulated according to the gain
3   between that user equipment and its partition such that lower gain user equipments transmit with
4   higher power than higher gain user equipments[[,]].

1   33.   (Currently Amended) Computer executable software code stored on a computer readable
2   medium for establishing a number of resource units making up a fixed allocation of spectral
3   resource made up of a plurality of resource units in a multiple access wireless link of a wireless
4   communication network, wherein the network has at least one base station which has at least two
5   partitions or the network has at least two base stations, each having at least one partition, the
6   code comprising:
7   code to determine a measure of a maximum likely number of child user equipments per
8   network partition; and
9   code to determine a fixed allocation of resource units based on the ratio of a number of
10 resource units in the link per unit time to the measure, said fixed allocation of resource units
11 being the same for all user equipments of the network[[,]].

1   34.   (Currently Amended) A programmed computer for establishing a number of resource

2   units making up a fixed allocation of spectral resource made up of a plurality of resource units in

3   a multiple access wireless link of a wireless communication network, ~~which stores~~ the

4   programmed computer storing computer executable program code, wherein the network has at

5   least one base station which has at least two partitions or the network has at least two base

6   stations, each having at least one partition, said code includes:

7   code for determining a measure of a maximum likely number of child user equipments

8   per network partition; and

9   code for determining the fixed allocation of resource units, said fixed allocation of

10   resource units being same for all user equipments of the network, based on the ratio of a number

11   of resource units in the link per unit time to the measure.

1   35.   (Currently Amended) A computer readable medium having computer executable

2   software code stored thereon, which code is for establishing a number of resource units making

3   up a fixed allocation of spectral resource made up of a plurality of resource units in a multiple

4   access wireless link of a wireless communication network, wherein the network has at least one

5   base station which has at least two partitions or the network has at least two base stations, each

6   having at least one partition, wherein the code is for carrying out the following:

7   determining a measure of a maximum likely number of child user equipments per

8   network partition; and

9   determining a fixed allocation of resource units based on the ratio of a number of

10   resource units in the link per unit time to the measure, [[,]]said fixed allocation of resource units

11   [[-]]being the same for all user equipments of the network[[,]].

1 36. (Previously Presented) Computer executable software code stored on a computer readable
2 medium for allocating a proportional allocation of spectral resource made up of a plurality of
3 resource units in a multiple access wireless link of a wireless communication network, wherein
4 the network has at least one base station which has at least two partitions or the network has at
5 least two base stations, each having at least one partition, the code comprising:

6   code for discarding resource units allocated to child user equipments in a fixed allocation
7 so as to determine remaining resource units, said fixed allocation of resource units being the
8 same for all user equipments of the network;

9   code for determining the gain of the radio link between the partition and each child user
10 equipment; and

11   code for allocating the remaining resource units among the child user equipments by
12 prioritising user equipments having a high gain link.

1 37. (Currently Amended) A wireless communication network, wherein the network has at
2 least one base station which has at least two partitions or the network has at least two base
3 stations, each having at least one partition, ~~via which~~ the network to allow at least one child user
4 equipment to communicate~~communicates~~ over a wireless link which link comprises spectral
5 resource made up of a plurality of resource units, wherein the network includes processing
6 means for establishing a number of resource units making up a fixed allocation of resource units,
7 said fixed allocation of resource units being the same for all user equipments of the network, and
8 means for allocating the fixed allocation of resource units to each child user equipment in ~~the~~a
9 particular partition.

1   38.   (Currently Amended) A resource allocation controller for use in a wireless

2   communications network for allocating spectral resource made up of a plurality of resource units

3   in a multiple access wireless link extending between a partition of a base station and at least one

4   child user equipment of the partition, wherein the network has at least one base station which has

5   at least two partitions or the network has at least two base stations, each having at least one

6   partition, wherein the controller comprises means for establishing a number of resource units

7   making up a fixed allocation of resource units, said fixed allocation of resource units being the

8   same for all user equipments of the network, and means for allocating the fixed allocation of

9   resource units to each child user equipment in the partition.

1   39.   (Currently Amended) A method for use in a wireless communications network for

2   allocating spectral resource made up of a plurality of resource units in a multiple access wireless

3   link extending between a partition of a base station and at least one child user equipment of the

4   partition, wherein the network has at least one base station which has at least two partitions or

5   the network has at least two base stations, each having at least one partition, the method

6   comprising:

7   determining a measure of a maximum likely number of child user equipments per

8   partition of the network;

9   calculating a fixed allocation of resource units based on the ratio of a number of resource

10   units in the partition per unit time to the measure, said fixed allocation of resource units [[-

11   ]]being the same for all user equipments of the network[[,]]; and

12   allocating the fixed allocation of resource units to each child user equipment in the

13   partition.

1   40.   (Previously Presented) A method for use in a wireless communications network for

2   allocating spectral resource made up of a plurality of resource units in a multiple access wireless

3   link extending between a partition of a base station and at least one child user equipment of the

4   partition, wherein the network has at least one base station which has at least two partitions or

5   the network has at least two base stations, each having at least one partition, the method

6   comprising:

7   establishing a minimum number of resource units making up a fixed allocation of

8   resource units, said fixed allocation of resource units being the same for all user equipments of

9   the network;

10   allocating the fixed allocation of resource units to each child user equipment in the

11   partition; and

12   allocating remaining resource units which are not allocated in the fixed allocation of

13   resource units to child user equipments, hereafter remaining resource units, to child user

14   equipments in the partition by:

15   determining the gain of the radio link between the partition and each child user

16   equipment; and

17   allocating the remaining resource units among the child user equipments by

18   prioritising user equipments having a high gain link.